	DOCKET FILE COPY ORIGINAL				
	DE THE				
BEFORE THE FEDERAL COMMUNICATIONS COMMISSION WASHINGTON, D.C. 20554					
In the Matter of					
Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992) CS Docket No. 98-82)				
Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996) CS Docket No. 96-85)				
The Commission's Cable Horizontal and Vertical Ownership Limits and Attribution Rules) MM Docket No. 92-264)				
Review of the Commission's Regulations Governing Attribution Of Broadcast and Cable/MDS Interests) MM Docket No. 94-150 (
Review of the Commission's Regulations and Policies Affecting Investment In the Broadcast Industry) MM Docket No. 92-51)				
Reexamination of the Commission's Cross-Interest Policy) MM Docket No. 87-154				

COMMENTS OF TIME WARNER CABLE

WAYNE D. JOHNSEN	HENK BRANDS
WILEY, REIN & FIELDING, L.L.P.	TEAL E. LUTHY
1776 K Street, N.W.	KELLOGG, HUBER, HANSEN,
Washington, D.C. 20006	TODD & EVANS, P.L.L.C.
(202) 719-7000	1615 M Street, N.W.
	Suite 400
ROBERT D. JOFFE	Washington, D.C. 20036
CRAVATH, SWAINE & MOORE	(202) 326-7900
Worldwide Plaza	,
825 Eighth Avenue	
New York, New York 10019	

(212) 474-1000

January 4, 2002

Table of Contents

			Page
Summary and	d Introd	uction	
Argument:			
]	THE COMMISSION SHOULD NOT REINSTATE ANY SUBSCRIBER LIMIT		
	Α.	Servic	se Foreclosure of Entry by New Video-Programming ses Does Not Constitute a Non-Conjectural Problem, a riber Limit Is Neither Necessary Nor Appropriate
		1.	If There Ever Were a Realistic Threat of Foreclosure, Increased Competition Has Eliminated It 10
		2.	Increases in Channel Capacity Have Further Made the Foreclosure Problem Unrealistic
		3.	Foreclosure Never Constituted a Non-Conjectural Problem in the First Place
		4.	Adopting a Subscriber Limit on the Basis of a Foreclosure Concern Would in Fact Do Much Harm 18
Ī	В.		if Foreclosure Did Constitute a Non-Conjectural Problem, ben-Field Approach Could Not Justify a Percentage Limit 19
		1.	Because the Assumption That Cable Operators Will Collude in Denying Carriage Is Flawed, the Open-Field Approach Could at Best Justify a 60-Percent Limit 20
		2.	Because the Other Open-Field Assumptions Are Also Unsupported, the Open-Field Approach Cannot Support Any Limit
			a. The Assumption That Entrant Video-Programming Services Need 15 Million Subscribers To Attain Viability Is Flawed
			b. The Assumption That Entrants Will Achieve Only 50-Percent Penetration Is Also Flawed 26

	C.	FNPR	Other Concentration-Related "Problems" to Which the RM Points Are Even More Conjectural Than the closure Concern	
		1.	The FNPRM Is Wrong in Suggesting That a Subscriber Limit May Be Needed To Safeguard Competing MVPDs' Access to Programming	
		2.	The FNPRM Is Wrong in Suggesting That MVPDs Will Have a Lesser Incentive To Innovate When Concentration Increases	
		3.	The FNPRM Is Wrong in Suggesting That a Subscriber Limit Is Necessary To Facilitate "Benchmarking" 33	
		4.	Any Suggestion That Concentration Results in Diminished Programming Variety Is Wrong	
II.		E COMMISSION SHOULD NOT REINSTATE ANY CHANNEL- CUPANCY LIMIT		
III.		_	ON DECISIONS	
	A. The Commission Should Not Repeal the Single-Majority-Shareholder Exception			
	В.	The C	Commission Should Not Reinstate the "No-Sale Criterion" 40	
Conclusion				

Summary and Introduction

In Time Warner Entertainment Co. v. FCC, 240 F.3d 1126 (D.C. Cir. 2001) ("Time Warner II"), cert. denied, No. 01-223 (Dec. 3, 2001), the United States Court of Appeals for the District of Columbia Circuit set aside the Commission's 30-percent subscriber limit, its 40-percent channel-occupancy limit, and two decisions related to the attribution rules. The Commission has invited comment on remand from that decision. See Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992, Further Notice of Proposed Rulemaking, CS Docket No. 98-82 et al., FCC 01-263 (rel. Sept. 21, 2001) ("FNPRM"). Time Warner Cable submits that the Commission should not reinstate any of the invalidated rules.

I.

A. Because no subscriber limit can be justified, the Commission should exercise the discretion granted it by the statute not to impose any subscriber limit. The foreclosure concern on which the Commission previously predicated its subscriber limit (*i.e.*, that multiple system operators ("MSOs"), if allowed to become too big, might be able to foreclose entry by new video-programming services) does not constitute a non-conjectural problem. If there ever were a foreclosure problem, it has now been eliminated. For one thing, competition from direct broadcast satellite ("DBS") and other multiple video programming distributors ("MVPDs") makes any anticompetitive conduct by cable operators implausible. Foreclosure would degrade a cable operator's channel line-up, which would encourage subscribers to switch to DBS. For another thing, increases in channel capacity have facilitated entry, making foreclosure unlikely.

Besides, there never was any non-conjectural problem to begin with. Entry by new video-programming services has long been rampant. MSOs have no incentive to foreclose

entry by new video-programming services, which, after all, can make their cable service more attractive. And the notion that MSOs may have an incentive to foreclose entry by new video-programming services that challenge their own video-programming services is equally implausible. Such foreclosure, which becomes less (not more) lucrative as an MSO increases in size, is doomed to fail if, as the Commission has found, video-programming services can become viable with only a few million subscribers.

Predicating a subscriber limit on an insubstantial foreclosure concern would be particularly improvident because a subscriber limit would destroy significant efficiencies. Large MSOs can operate at a lower cost than small MSOs, can therefore charge lower rates, and are better able to provide innovative non-video-programming services. Moreover, limiting MSOs' size may actually impede entry by new video-programming services, because larger MSOs have more channels than smaller MSOs, can save video-programming services transaction costs, and have a greater stake in video-programming services' financial well-being.

B. Even if there were a non-conjectural risk of foreclosure, the Commission could not logically adopt the same 30-percent limit that it previously adopted. That limit was aimed at maintaining a 40-percent "open field." The open-field approach was based on three steps: (1) that a new programming network must reach 20 percent of MVPD subscribers to succeed; (2) that a video-programming service has only a 50-percent chance of reaching subscribers who are not actively denied to it; and (3) that the two largest MSOs are likely to collude in denying carriage.

The open-field approach could at best support a 60-percent subscriber limit, because the third step is entirely unsupported. There is no evidence that cable operators have ever agreed

not to carry a video-programming service. Such collusion would be unlawful and would almost certainly fail. Moreover, the posited collusion would be particularly vulnerable to chiseling: the non-simultaneous timing of the collusive acts would make the pact difficult to maintain. Besides, even if there were a realistic risk of collusion, it could still not logically support any subscriber limit.

A 60-percent limit is also unsupportable because the other two open-field assumptions are also mistaken. *First*, video-programming services do not need 15 million subscribers to become viable: there is ample evidence of video-programming services becoming viable with fewer subscribers. Besides, even if the 15 million figure were accurate, it would make no sense to assume that the 15 million minimum allotment must be found entirely in the U.S. Nor does it make sense to translate that absolute figure into a percentage of the constantly changing subscriber universe.

Second, the 50-percent success rate is too low. The Commission arrived at the 50-percent number by averaging the carriage numbers of all U.S. video-programming services. But that average number was weighed down by failing services as well as very recent entrants. Thus, the number is not an accurate proxy for a meritorious new entrant's chances of gaining carriage. A better proxy would be the penetration rate of mature and successful services.

C. The Commission also asks whether problems other than foreclosure can justify a subscriber limit. It would be a remarkable coincidence if the invalidated subscriber limit could be supported by a concern that did not occur to the Commission previously, despite three rounds of comments. Each of the suggested "problems" is entirely conjectural.

First, there is no need for a subscriber limit on the theory that the Commission should curb license-fee discounts received by large MSOs. Those discounts reflect legitimate efficiencies, which is borne out by their incidence in the presence of MVPD-level competition. Eliminating these discounts would not promote competition: cable's MVPD rivals themselves are large firms entitled to discounts. Besides, it is unclear how one could logically derive a percentage limit from any concern with discounts.

Second, a subscriber limit cannot be predicated on any notion that smaller MVPDs have a greater incentive to innovate. The facts point in precisely the opposite direction: large MSOs have consistently been more innovative than small MSOs.

Third, a subscriber limit cannot be predicated on any desire to facilitate "benchmarking" by local franchising authorities. The statute permits the Commission to act only on competition-promoting considerations. Moreover, given that the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act") prohibits local franchising authorities from engaging in almost all forms of benchmarking, it is unclear how this could even be a legitimate governmental interest. Besides, it is impossible to translate any benchmarking concern into a percentage limit — let alone a 30-percent limit.

Finally, the notion that MVPDs subject to competition may provide more varied programming cannot support a subscriber limit either. Imposing a subscriber limit does not create competition.

II.

The Commission should not reinstate a channel-occupancy limit. The foreclosure concern underlying the channel-occupancy limit is unsupported. And the statute permits the

Commission to decline adopting a new channel-occupancy limit. If the Commission does adopt a limit, it must make an exception for localities in which there is effective competition.

III.

The Commission should not reinstate its invalidated attribution decisions. *First*, it should not repeal the single-majority-shareholder exception. Where there is such a shareholder, other shareholders cannot influence programming decisions. *Second*, the Commission should repeal the "no sale" criterion for partnership insulation. Being a seller of video-programming services does not enhance a partner's influence. In light of other criteria, there is also no risk that influence exercised *qua* video-programming service will cloak influence exercised *qua* partner.

Argument

I. THE COMMISSION SHOULD NOT REINSTATE ANY SUBSCRIBER LIMIT.

The Commission for the first time adopted a subscriber limit in 1993, concluding that a 30-percent limit was necessary to prevent "the possibility that large horizontally integrated MSOs might have the ability to preclude the launch of new video programming services." The Commission did not explain, however, why that rationale implied a 30-percent limit instead of, say, a 40-percent or 60-percent limit. It stated only that a 30-percent limit reasonably balanced the stated concern against "the benefits and efficiencies that result from greater horizontal concentration." Second Report ¶ 25.

After Time Warner filed a petition for review, the Commission reopened its subscriber-limits rulemaking.² In October 1999 (after Time Warner had filed its briefs explaining the shortcomings of the 1993 order but before the court of appeals could hear oral argument), the Commission issued a *Third Report*,³ in which it reaffirmed the 30-percent limit in all relevant respects.

For the first time, the Commission attempted to link the 30-percent line drawn to the previously expressed foreclosure rationale. It did so through a chain of three steps of

¹Implementation of Sections 11 and 13 of the Cable Television Consumer Protection and Competition Act of 1992; Horizontal and Vertical Ownership Limits, Second Report and Order, 8 FCC Rcd 8565, ¶ 25 (1993) ("Second Report").

²See Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992; Horizontal Ownership Limits, Memorandum Opinion and Order on Reconsideration and Further Notice of Proposed Rulemaking, 13 FCC Rcd 14462 (1998).

³See Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992; Horizontal Ownership Limits, Third Report and Order, 14 FCC Rcd 19098 (1999) ("Third Report").

reasoning. First, the Commission estimated that a new video-programming service "needs 15 million subscribers in order to have a reasonable chance to achieve economic viability." Third Report ¶ 42. The Commission calculated that 15 million subscribers amounted to about 20 percent of the total MVPD subscriber universe. See id. ¶¶ 42, 45. Second, the Commission estimated that, on average, a new video-programming service would have only about a 50-percent chance of gaining carriage even if cable operators did not seek to foreclose their entry. See id. ¶¶ 48-50. Based on these two steps, the Commission concluded that, to be viable, a new video-programming service would need an "open field" of 40 percent. Id. ¶¶ 47, 50.

To the two steps described above, which still justified a subscriber limit no lower than 60 percent, the Commission then added a crucial third step. The Commission concluded that it should ensure that new video-programming services had access to the requisite open field even in the event that the two largest cable operators would deny carriage "collusively" — i.e., would agree that neither would carry a particular new video-programming service. Id. ¶ 53. Thus, the Commission again settled on a 30-percent limit, saying that this would yield a 40-percent open field even if the top two MSOs colluded in denying cable carriage. See id.

The 30-percent limit was set aside by the D.C. Circuit in *Time Warner II*. Recognizing that a subscriber limit interferes with cable operators' right to engage in protected speech, the court of appeals subjected the limit to intermediate First Amendment scrutiny. Applying the familiar standard of *United States v. O'Brien*, 391 U.S. 367 (1968), and the Supreme Court's *Turner* decisions, 4 the court of appeals required the Commission to show that the subscriber

⁴Turner Broadcasting System, Inc. v. FCC, 512 U.S. 622 (1994) ("Turner I"); Turner Broadcasting System, Inc. v. FCC, 520 U.S. 180 (1997) ("Turner II").

limit "advances important governmental interests unrelated to the suppression of free speech and does not burden substantially more speech than necessary to further those interests." *Time Warner II*, 240 F.3d at 1130 (internal quotation marks omitted). This meant that the Commission had to "'demonstrat[e] that the recited harms are real, not merely conjectural,'" through "'reasonable inferences based on substantial evidence.'" *Id.* at 1130, 1133 (quoting *Turner I*, 512 U.S. at 664, 666 (plurality opinion)). In addition, the court required the Commission "to link the numerical limits to the benefits and detriments depicted." *Id.* at 1138.

Applying these principles, the court of appeals determined that the Commission's decision to draw the line at 30 percent was unsubstantiated. The court assumed for purposes of its analysis the validity of the first two steps in the Commission's reasoning. See id. at 1132 ("[a]ssuming the validity of the premises supporting the FCC's conclusion that a 40% 'open field' is necessary (a question that we need not answer here)"); see also FNPRM ¶ 48 n.112. But those two steps alone, the court observed, could justify a cap no lower than 60 percent. See Time Warner II, 240 F.3d at 1132. The Commission's selection of a 30-percent cap thus crucially depended on the third step: that two cable operators might collude in refusing to carry new video-programming services. See id. Again for purposes of discussion, the court assumed that this third step could lawfully support a 30-percent limit if the record before the Commission demonstrated a non-conjectural risk of collusion. See id. at 1131.

The court of appeals found, however, that there was no "record support for inferring a non-conjectural risk of collusive rejection." *Id.* at 1132. As the court determined, Congress had never made any finding to that effect, and the Commission had "put forth no evidence at all that indicates the prospects for collusion." *Id.* at 1133; *see also id.* at 1136 ("[T]he

Commission has pointed to nothing in the record supporting a non-conjectural risk of anticompetitive behavior, either by collusion or other means."). Accordingly, the court of appeals "reverse[d] and remand[ed] with respect to the 30% rule." *Id*. The Commission instituted these proceedings on remand. *See FNPRM* ¶ 2.

A. Because Foreclosure of Entry by New Video-Programming Services Does Not Constitute a Non-Conjectural Problem, a Subscriber Limit Is Neither Necessary Nor Appropriate.

Recognizing that the court of appeals never had occasion to pass on the validity of this premise, the *FNPRM* invites comment on whether the foreclosure concern underlying the Commission's subscriber limit constitutes a non-conjectural problem. *See id.* ¶ 28. The answer is no: the suggested risk is simply far-fetched. There has always been rampant entry by new video-programming services, and recent increases in competition and channel capacity have further facilitated entry. In a nutshell, concern about continued entry by new video-programming services is like concern about the continued availability of sand in the Sahara.⁵ Because no subscriber limit can be justified, the Commission should exercise the discretion granted it by the statute not to impose any subscriber limit.⁶

⁵The Commission's expression of concern about carriage opportunities for new video-programming services is also out of step with its on-going inquiry whether broadcast television stations should be given dual must-carry rights with respect to digital signals. See Carriage of Digital Television Broadcast Signals; Amendments to Part 76 of the Commission's Rules, First Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 2598 (2001). Any such digital must-carry rights would be far more detrimental to the ability of new video-programming services to gain carriage than the effects of MSO size could ever be.

⁶Under 47 U.S.C. § 533(f)(1), the Commission must conduct a rulemaking to establish a "reasonable" limit. If the Commission determines that limits are unnecessary, it is plainly at liberty to adopt no limit at all. See Telecommunications Resellers Ass'n v. FCC, 141 F.3d 1193, 1197 & n.6 (D.C. Cir. 1998) (holding that a statute directing the Commission to adopt "such . . . regulations as are necessary" left the Commission free not to adopt any regulations

1. If There Ever Were a Realistic Threat of Foreclosure, Increased Competition Has Eliminated It.

DBS and other MVPDs are now much more powerful competitors to cable operators than at any time when the Commission previously considered subscriber limits. DBS operators currently have more than 17.2 million U.S. subscribers, accounting for almost 20 percent of the national MVPD subscriber universe. All of those subscribers were signed up in just seven years — since June 1994, when DirecTV began offering service. Since November 1999, when DBS operators were first allowed to provide local broadcast signals, DBS's disciplining force on cable operators has only increased. The vast majority of new MVPD subscribers

at all). Any reading under which the Commission would be required to adopt limits even in the absence of a non-conjectural problem would violate the First Amendment and should therefore be avoided for that reason. See, e.g., Legal Servs. Corp. v. Velazquez, 531 U.S. 533, 545 (2001) ("It is well understood that when there are two reasonable constructions for a statute, yet one raises a constitutional question, the Court should prefer the interpretation which avoids the constitutional issue.").

⁷See SkyREPORT, National DTH Counts, http://www.skyreport.com/dth_us.htm (November 2001 data).

⁸As of July 2001, there were about 88.79 million MVPD subscribers, of which about 16 million were DBS subscribers. *See* Comments of the National Cable & Telecommunications Association at 7, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Docket No. 01-129 (FCC filed Aug. 2, 2001) ("*NCTA Comments*").

⁹See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Third Annual Report, 12 FCC Rcd 4358, ¶ 40 (1997).

¹⁰See Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992; Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment, Report on Cable Industry Prices, 16 FCC Rcd 4346, ¶ 53 & n.47 (2001) ("2000 Cable Rates Report").

are DBS subscribers.¹¹ DBS operators are signing up more than 200,000 subscribers per month, or almost a full percentage point of the MVPD subscriber universe every four months.¹²

In addition, cable operators continue to be subject to strong competition from other MVPDs. As of July 2001, non-cable/non-DBS MVPDs served 4.23 million MVPD subscribers, or 4.76 percent of the MVPD subscriber universe.¹³ This included 1.50 million satellite master antenna television ("SMATV") subscribers, 1.02 million C-band subscribers, 0.70 million multichannel multipoint distribution services ("MMDS") subscribers, 0.66 million overbuild subscribers, and 0.35 million local exchange carrier ("LEC") subscribers.¹⁴ Cable's overall share of the MVPD subscriber universe has thus fallen to 77.14 percent.¹⁵

Even more significant than the raw number of cable subscribers who have already switched to non-cable MVPDs is the number of cable subscribers who could do so at any given time. See Time Warner II, 240 F.3d at 1134 ("[A] company's ability to exercise market power depends not only on its share of the market, but also on the elasticities of supply and demand, which in turn are determined by the availability of competition."). As the D.C. Circuit noted, DBS, with its nationwide footprint, "could be considered to 'pass every home.'" id. (quoting

¹¹See NCTA Comments 8.

¹²See SkyREPORT, National DTH Counts, http://www.skyreport.com/dth us.htm.

¹³See NCTA Comments 7.

¹⁴See NCTA Comments 7.

¹⁵See NCTA Comments 8-9. In addition, cable operators are subject to competition from various non-MVPD sources, including streaming video over the Internet, VCR and DVD sales and rentals, and broadcast television. See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Seventh Annual Report, 16 FCC Rcd 6005, ¶ 14 (2001) ("Seventh Competition Report").

Third Report ¶ 20). Thus, virtually every cable subscriber displeased with cable can now immediately switch to a DBS provider. It is true that some cable subscribers cannot receive DBS signals — say, because they have no unobstructed view of the southern sky or because they live in an apartment building and are unable to erect a satellite dish. See Seventh Competition Report ¶ 140. But those cable subscribers are randomly dispersed among subscribers who can switch to DBS. Thus, there is no practical way in which cable operators can discriminate against them; if they decide not to carry a particular service, it is unavailable to all subscribers.

Assuming that cable operators could ever have profitably denied carriage to video-programming services for anticompetitive reasons, the universal availability of DBS and other MVPDs has eliminated that ability. As the D.C. Circuit acknowledged, if a cable operator tried to foreclose an attractive new video-programming service, it would impair the quality of its multichannel offering. If its MVPD competitors carried the new service, the cable operator might lose subscribers to those competitors. *See Time Warner II*, 240 F.3d at 1134 ("If an MVPD refuses to offer new programming, customers with access to an alternative MVPD may switch."). Thus, the strategy would prove unprofitable and self-defeating. *See id.* at 1139 ("competition raises the stakes for a firm that sacrifices the optimal price-quality trade-off in its acquisition of programming").

Indeed, the *FNPRM* acknowledges just that: "When entities compete in the downstream market, i.e., for MVPD subscribers, they have an incentive to try to offer the highest quality programming possible. If they do not (e.g., if they choose programming based on affiliation rather than consumer demand), some of their subscribers may switch to competing MVPDs

and, as a result, their revenues would fall." *FNPRM* ¶ 65 n.148; *see also id*. ¶ 22 ("[T]he competitive presence of DBS reduces cable operators' incentive to choose programming for reasons other than quality because a cable operator that selects programming on some other basis risks loss of subscribers if high quality programming is available via DBS."); *id*. ¶ 42 ("Cable MSOs, especially in the face of DBS' nationwide reach, have an interest in offering the most competitive programming possible, regardless of its source.").

The *FNPRM* nevertheless suggests that "there are questions concerning DBS' ability to constrain cable prices." *Id.* ¶ 22. Even if that were so, this would not matter for present purposes so long as DBS has a disciplining effect on cable operators' programming choices. It does: as the D.C. Circuit noted, the Commission itself has so recognized. *See Time Warner II*, 240 F.3d at 1134 (citing *Seventh Competition Report* ¶ 67). Besides, the Commission's most recent price survey noted that the elimination of the prohibition on DBS carriage of local broadcast signals has made DBS an even more formidable rival. *See 2000 Cable Rates Report* ¶ 53. The Commission therefore concluded that "DBS is a substitute for cable services." *Id.*; *see also FNPRM* ¶ 22 n.65.

2. Increases in Channel Capacity Have Further Made the Foreclosure Problem Unrealistic.

As the *FNPRM* acknowledges, channel capacity has grown massively in recent years, which has further facilitated entry by new video-programming services. *See FNPRM* ¶¶ 25, 42, 78. When the Commission first considered a subscriber limit, a majority of cable systems had between 30 and 53 channels. *See id.* ¶ 25. Today, cable operators on average provide 80 analog channels. *See id.* In addition, most cable systems are now providing packages of

scores of digital video-programming services. *See id.* The penetration of digital cable packages is expected to increase rapidly in the coming years — to as much as 70 percent by 2005. *See* Paul L. Joskow & Linda McLaughlin, *An Economic Analysis of Subscriber Limits* 5 & n.10 (Jan. 3, 2002) ("Joskow & McLaughlin") (attached hereto at Tab 1). Thus, placement on a digital tier will increasingly be as valuable to video-programming services as placement on an analog tier.

Plainly, this increase in channel capacity facilitates entry by new video-programming services. Whereas limited channel capacity may previously have required cable operators to choose between closely comparable video-programming services, system upgrades have made it easier for cable operators to avoid making that choice. "More channel capacity . . . reduces the opportunity cost of carrying one program service instead of another when channel capacity constraints are binding and makes it easier to carry services that the operator might previously have chosen not to carry due to channel constraints." *Id.* at 5.

3. Foreclosure Never Constituted a Non-Conjectural Problem in the First Place.

It is nothing short of remarkable that the Commission should express concern about entry by new video-programming services. Despite the absence of any subscriber limit, ¹⁶ entry into the video-programming industry has long been rampant. For example, in the eight years between 1993 and 2001, the number of national video-programming services almost *tripled*,

¹⁶The subscriber limit that the Commission adopted in 1993 was stayed pending litigation. See Second Report ¶ 109. It did not become effective until May 19, 2000. See Cable Television Consumer Protection and Competition Act of 1992; Horizontal Ownership Limits, 65 Fed. Reg. 36382 (June 8, 2000). It was set aside on March 2, 2001, when the D.C. Circuit handed down its decision in Time Warner II.

from 99 in 1993 to 281 in 2001.¹⁷ And many of the new entrants have proved to be powerful competitors.¹⁸ For example, Fox News Channel gas mounted a successful challenge to CNN.¹⁹ There are numerous other examples of recent entrants that have quickly gained substantial numbers of subscribers.²⁰

The complete lack of evidence of blocked entry is not surprising. Cable operators have no incentive to block entry by new video-programming services. If cable operators can provide more and better video-programming services, their product (cable service) becomes more attractive and therefore more valuable to cable subscribers. *See* Joskow &

¹⁷See Seventh Competition Report ¶ 14; Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992; Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, First Report, 9 FCC Rcd 7442, ¶ 100 (1994) ("First Competition Report").

¹⁸See generally Seventh Competition Report Table D-7.

¹⁹See, e.g., FNPRM ¶ 42 ("MSNBC and FoxNews have been able to emerge as competitors to CNN despite CNN's first mover advantage"); John Higgins, Fox News Gains Ground on CNN, Broadcasting & Cable (Oct. 1, 2001) ("Fox's specialty, commentary and chat, has narrowed CNN's lead 12-18% in prime and 20-30% for the total day. Still, even the narrower lead is a big improvement for CNN, which was actually falling behind the upstart Fox over the summer when the Condit-Levy story held sway. . . . Fox is still beating MSNBC badly in prime time."); Allison Romano, Shocking Fox News Gains!, Broadcasting & Cable (Aug. 6, 2001) ("Fox News Channel is continuing its ratings tear, besting CNN for the sixth consecutive month. . . . For July, the five-year-old upstart harvested a 0.8 rating (532,000 viewers), vanquishing both CNN (0.7, but with 580,000 viewers because CNN serves a larger audience) and MSNBC (0.4, 247,000) in prime time, according to Turner Entertainment Research analysis of Nielsen Media Research data. Fox News doubled its prime time ratings from a year ago, growing from a 0.4 in July 2000.").

²⁰For example, Discovery Health, which entered in July 1998, has 32 million subscribers; Toon Disney, which entered in April 1998, has 27.9 million subscribers; BBC America, which entered in March 1998, has 24 million subscribers; and Noggin, which entered in February 1999, has 17.5 million subscribers. *See Seventh Competition Report* Tables D-1, D-2; Kagan World Media, *Cable Program Investor* 8 (Nov. 29, 2001).

McLaughlin 6, 7; Bruce M. Owen & Steven S. Wildman, *Video Economics* 235-36 (Harv. Univ. Press 1992) ("It is in the economic interest of MSOs to encourage new program services, because new program services enhance the demand for cable service."). Thus, entry by more and better video-programming services can increase cable penetration, yielding cable operators increased subscription and advertising revenue. Cable operators therefore have an interest in facilitating entry by new video-programming services — not in blocking it.

It has sometimes been argued that cable operators may nevertheless have an incentive to foreclose entry by a video-programming service that is directly comparable to a video-programming service with which it is affiliated. In this reasoning, Time Warner Cable might have an incentive to block entry by a video-programming service that is closely comparable to CNN, a video-programming service with which Time Warner Cable is affiliated. The theory would be that Time Warner Cable might decide not to carry such a rival service hoping that this would cause the service to fail. This in turn would limit competition to CNN, the reasoning goes, thus ensuring that other MVPDs will pay high license fees to CNN. In this thinking, Time Warner Cable might deny carriage even though this might degrade its cable service and thereby risk losing cable subscription revenue.

This scenario has always been implausible. The posited incentive would exist only if the expected income from selling the video-programming service to other MVPDs would exceed the expected loss of income from providing a less-than-optimal package of video-programming services. That the former outweighs the latter becomes *less* (not more) likely as an MSO grows in size: as the MSO's reach expands, the number of subscribers that it serves increases and the number of subscribers served by other MVPDs declines. *See* Joskow &

McLaughlin 24. Moreover, the expected profit from the exclusionary strategy would have to be discounted heavily against the possibility that the strategy would fail. After all, failure is almost a given when — as this Commission has found — entrants can become viable with only a few million subscribers. See Third Report ¶ 42.

Moreover, if discrimination against unaffiliated services were a realistic problem, one would expect that the number of independent services would be declining: few entrants would be willing to sink capital in the face of likely anticompetitive exclusion. But, in fact, independent programming networks have proliferated. As the *FNPRM* notes, "between 1994 and September 2001, . . . the percentage of programming networks that were affiliated with at least one cable MSO declined from 53 percent to about 25 percent." *FNPRM* ¶ 79.

Moreover, of the 20 most widely carried video-programming services, 12 are now independent — up from only five in 1993. *Compare Seventh Competition Report* Table D-6 with First Competition Report Table G-7. Again, these developments occurred while no subscriber limit was in effect.

In any event, even if an incentive to discriminate might exist, the Commission has had rules in place since 1993 specifically targeting discrimination on the basis of affiliation. See 47 U.S.C. § 536(a)(3); 47 C.F.R. § 76.1301(c). Adopting the further structural remedy of a subscriber limit to guard against discrimination would make sense only if there were evidence that these more targeted measures were not working. It is hard to see how the Commission could make that finding. In the history of these measures, only a single complaint has ever been filed — and that complaint (filed against a relatively small MVPD) was settled amicably.

See Classic Sports Network, Inc. v. Cablevision Systems Corp., Order, 12 FCC Rcd 22100 (1997). The absence of complaints underscores the absence of any non-conjectural problem.

4. Adopting a Subscriber Limit on the Basis of a Foreclosure Concern Would in Fact Do Much Harm.

The Commission should demand particularly unequivocal evidence of a foreclosure concern because imposing a subscriber limit is not an "if it won't help it also won't hurt" matter. Through clustering and other operating efficiencies, large MSOs can generally operate at a lower cost than small MSOs. *See* Joskow & McLaughlin 14-16, 25-26. This allows large MSOs to charge their subscribers lower rates. *See id.* at 16, 22, 28. It also allows them to offer innovative services like cable-modem and telephony service, which smaller MSOs cannot as easily provide. *See id.* at 22-23, 28. Plainly, these efficiencies should not be destroyed.²¹

Moreover, limiting MSOs' size may be counterproductive: it may actually impede entry by new video-programming services. ²² For one thing, larger MSOs tend to have greater channel capacity than smaller MSOs and therefore tend to carry more video-programming services. *See id.* at 5-6, 14, 19. For another thing, video-programming services save themselves obvious transaction costs when they do business with large MVPDs, and eliminating these efficiencies would hamper entry. *See id.* at 26.²³ Further, large MVPDs can provide

²¹This is particularly true in light of 47 U.S.C. § 533(f)(2)(D), which provides that the Commission must "account for any efficiencies and other benefits that might be gained" through horizontal concentration.

²²This would again be contrary to the statute. See 47 U.S.C. § 533(f)(2)(G) (instructing the Commission not to "impose limitations which would impair the development of diverse and high quality video programming").

²³See Video Economics 244; H.R. Rep. No. 628, 102d Cong., 2d Sess. 43 (1992) ("The Committee believes that the growth of MSOs in the cable industry has produced some

video-programming services with a degree of risk reduction that small MVPDs cannot.²⁴ Finally, larger MSOs have a greater stake in video-programming services' financial well-being and will thus be less (not more) likely to seek lower license fees. *See id.* at 14-16; *FNPRM* ¶ 37; *Video Economics* 243.

B. Even if Foreclosure Did Constitute a Non-Conjectural Problem, the Open-Field Approach Could Not Justify a Percentage Limit.

In response to the foreclosure concern, the Commission previously adopted a 30-percent subscriber limit aimed at maintaining a 40-percent "open field." The open-field approach assumed (1) that, to succeed, a new programming network must reach 15 million MVPD subscribers (at the time, 20 percent of the subscriber universe); (2) that a video-programming service has only a 50-percent chance of obtaining subscribers who are not actively denied to it and thus must have access to MVPDs serving at least 40 percent of all MVPD subscribers; and (3) that the two largest MSOs are likely to collude in denying access to programmers, so that a 30-percent — not a 60-percent — limit is warranted.

efficiencies in administration, distribution, and procurement of programming. Further, programmers' transaction costs also may have been reduced in the absence of the need for negotiation with each of thousands of local cable systems throughout the country.").

²⁴Like most businesses, video-programming services have sunk costs. Because such costs are by definition not recoverable upon exit, sunk costs increase a firm's risk, which implies a higher cost of capital (and thus a higher internal rate of return). Large MVPDs can reduce video-programming services' risk to a much greater extent than small MVPDs: a long-term contract with a large MVPD helps guarantee that a video-programming service will recover its sunk costs. Naturally, an MVPD able to reduce a video-programming service's risk in this way is entitled to a lower rate — just as a firm agreeing to buy a factory's entire output over a period of years receives a lower per-unit price than a firm committing to buy only a few units. See Joskow & McLaughlin 14-15.

Because the third of these three steps is entirely unsupported, the open-field approach could at best support a 60-percent limit. But, because the other two steps likewise lack support, the open-field approach could not support any subscriber limit at all.

1. Because the Assumption That Cable Operators Will Collude in Denying Carriage Is Flawed, the Open-Field Approach Could at Best Justify a 60-Percent Limit.

The Commission seeks "information on the types of coordinated or collusive conduct among cable operators that might be relevant to the establishment of a limit." FNPRM ¶ 56.

Apparently, the posited collusion would consist of an agreement among cable operators not to carry a particular entrant video-programming service. As already explained, cable operators — without more — have no incentive to fence out new entrants: new video-programming services make their cable service more attractive. See supra, pp. 15-16. Thus, the collusion theory must again be tied to vertical integration and the assumption that cable operators will attempt to block entry of competitors in order to benefit affiliated video-programming services. See id.

Presumably, then, the collusion theory would have two vertically integrated cable operators agree that they will each decline to carry a new entrant seeking to compete with a video-programming service owned by the other.

There is not a shred of evidence that two or more cable operators have ever agreed not to carry a particular video-programming service. The absence of evidence is not surprising: the posited collusion is utterly implausible. Because foreclosure would usually give vastly different benefits to different parties, it would be exceedingly difficult to agree on collusive terms. See Joskow & McLaughlin 20. Moreover, because license agreements between MVPDs and video-programming services are usually negotiated in private, one colluder would

have no easy way of signaling its intent or actions to the other colluder. Thus, the collusive arrangement would necessarily depend on express agreements and information exchanges in "smoky back rooms." Collusion of this kind is plainly unlawful under Section 1 of the Sherman Act, 15 U.S.C. § 1, and can result in severe civil and criminal penalties, *see id*.

That is a high price to pay for an arrangement that would almost certainly fail. Even in the Commission's view, a new video-programming service needs only a few million subscribers to break into the industry. *See infra*, p.24. Thus, unless it involved almost the entire MVPD industry, any collusive arrangement would likely fail. The new video-programming service could easily gain a foothold in the open field; wage a targeted marketing campaign from there ("if you are not receiving the XYZ channel, call your cable operator or satellite provider"); and, if it was, in fact, a service that consumers desired, ultimately force even the colluders to carry it.

Moreover, the posited kind of collusive arrangement would be particularly prone to collapse. Collusive arrangements are difficult enough to sustain even in the case of a simple price-fixing cartel: it is well-established that most such arrangements in time succumb to chiseling.²⁵ The posited collusive arrangement would be significantly more vulnerable to

²⁵See, e.g., Business Elecs. Corp. v. Sharp Elecs. Corp., 485 U.S. 717, 727 (1988) ("Cartels are neither easy to form nor easy to maintain. Uncertainty over the terms of the cartel, particularly the prices to be charged in the future, obstructs both formation and adherence by making cheating easier."); Robert H. Bork, The Antitrust Paradox: A Policy at War with Itself 183 (1978) ("[P]rice-fixing conspiracies themselves are often fragile. Changing market conditions and the temptation to 'cheat' frequently result in outbreaks of price competition that either destroy the cartel or must be repaired by further meetings and agreements."); George J. Stigler, A Theory of Oligopoly, 72 J. Pol. Econ. 44, 46 (1964) ("[N]o conspiracy can neglect the problem of enforcement . . . [or] detecting significant deviations from the agreed-upon prices. . . . If the enforcement is weak, . . . the conspiracy

chiseling. It will be the rare case where each of multiple colluding cable operators would simultaneously see its own video-programming services challenged by new entrants. Thus, in most cases, one of the colluders would decline carriage (injurious to its own immediate interests) in the expectation that the other colluder would reciprocate at some uncertain time in the future. Moreover, if and when that time would come, there would be no easy way to enforce the bargain — which, after all, is illegal and thus unenforceable in court. See 15 U.S.C. § 1. The other colluder would therefore be under great temptation to renege.

And the problems with the collusion theory do not end there. For one thing, the collusion rationale has no logical stopping point. If collusion between the number one and number two MSOs really were as likely as would be required to justify a 30-percent limit, collusion by MSOs lower on the list would arguably be just as likely. In that case, no good would come from a 30-percent limit — or, for that matter, any limit. Even if the top MSO were below the 30-percent cap, it could still deny entry to new video-programming services by colluding with more than one fellow MSO. The point here is not that collusion requires an even lower cap; instead, the point is that collusion could not logically justify any cap. ²⁶

must recognize its weakness: it must set prices not much above the competitive level so the inducements to price-cutting are small, or it must restrict the conspiracy to areas in which enforcement can be made efficient.").

²⁶In the *Third Report*, the Commission stated that "we believe that assuming coordinated action by two operators rather than by three or more operators is appropriate at this time." *Third Report* ¶ 47. But it never explained why that was so, other than by pointing to "the economic commonplace that, all other things being equal, collusion is less likely when there are more firms." *Time Warner II*, 240 F.3d at 1132. In particular, the Commission never pointed to evidence that collusion between two MSOs was so much more likely than collusion among three or more MSOs that only the former was in need of a regulatory response. Nor could it have. *See* George Hay & Daniel Kelley, *An Empirical Survey of Price Fixing Conspiracies*, 17 J.L. & Econ. 13, 22 (1974) (of 62 collusion cases prosecuted in 10-year period, only one

For another thing, the convenient way in which the collusion rationale snips the 60-percent foreclosure zone into two equal-sized halves is simply unconvincing. The *Third Report* set the limit at 30 percent so that, assuming that the number one MSO would collude with the number two, a 40-percent open field would still remain. But a 30-percent limit could follow from those assumptions only if one makes the additional assumption that the number two MSO would always be precisely as large as the number one MSO. That assumption is simply unreasonable.²⁷ Thus, even assuming that two-firm collusion were a non-conjectural threat, it could logically support only a rule prohibiting the top two MSOs *in the aggregate* from serving more than 60 percent of the subscriber universe.²⁸

2. Because the Other Open-Field Assumptions Are Also Unsupported, the Open-Field Approach Cannot Support Any Limit.

As explained above, the Commission's collusion theory is unsupported, so the open-field approach could at best justify a 60-percent subscriber limit. But, because each of the first two steps in the Commission's open-field approach is also flawed, that approach cannot support any limit.

involved two competitors, seven involved three, and the other 54 involved more than three).

²⁷Current facts contradict that tacit assumption. See Seventh Competition Report Table C-3 (showing the largest MSO as serving 19 percent of the subscriber universe while the second largest MSO served less than 15 percent). In fact, there has never been a time when that was so.

²⁸For example, if the number two MSO reached only 15 percent of subscribers, even a 45-percent subscriber limit would leave a 40-percent open field.

a. The Assumption That Entrant Video-Programming Services Need 15 Million Subscribers To Attain Viability Is Flawed.

The Commission has in the past assumed that a new video-programming service needs 15 million U.S. MVPD subscribers to become viable. But, as the *Third Report* recognized, many video-programming services have survived for long periods of time with fewer than 15 million subscribers. *See Third Report* ¶ 42 n.96. Indeed, as the *FNPRM* recognizes, some networks "can survive with distribution to a few million subscribers." *FNPRM* ¶ 13. There are numerous examples of video-programming services with fewer than 15 million subscribers. Sixteen of the networks surveyed by Kagan in *Cable Television Household Growth 1988-98* had fewer than 15 million subscribers in 1998, and 14 of those 16 had been in business for three or more years. 30

The Commission should place no weight on the number of subscribers currently reached by so-called "marquee" networks.³¹ Just as Toyota entered with Corollas (not

²⁹The GoodLife TV Network, launched 16 years ago in 1985, has 11 million subscribers. *See* NCTA, 2001 Cable Programming Guidebook 170-76, http://www.ncta.com/guidebook_pdfs/Guidebook_Total.pdf. The International Channel, launched 11 years ago, has 10 million subscribers. *See id.* at 229-32. The Major Broadcasting Cable ("MBC") Network, "[t]he only African-American, 24-hour, owned and operated, family oriented cable network," launched in 1998 to 3 million subscribers and is now available to fewer than 11 million subscribers. *See id.* at 240-42. The Independent Film Channel launched in 1994 and currently has 14 million subscribers. *See Seventh Competition Report* Tables D-1, D-5. Ovation launched in 1996 and currently has 7 million subscribers. *See id.*

³⁰See Paul Kagan Associates, Inc., Cable Television Household Growth 1988-98, Cable Program Investor 12-13 (Mar. 15, 1999).

³¹The FNPRM points to the decision of the Federal Trade Commission ("FTC") in *In re Time Warner Inc.*, Decision and Order, 123 F.T.C. 171 (1997), for the proposition that "'the [successful] launch of any significant new channel usually requires distribution on MVPDs that cover 40-60% of subscribers.'" FNPRM ¶ 53 (quoting *Time Warner Inc.*, 123 F.T.C. at 211 (statement of Chairman Robert Pitofsky and Commissioners Janet D. Steiger and Christine A.

Camrys), most marquee networks did not enter as marquee networks. *See FNPRM* ¶ 54. For instance, ESPN at launch in 1979 had only 1.2 million subscribers,³² and its early programming was "obscure."³³ Indeed, a number of entrants that in recent years have achieved substantial penetration had far fewer than 15 million subscribers for some years after their inception. *See* Joskow & McLaughlin 17-18; *id.* Table 1; *id.* Graph 6. This is not surprising, because the supposition that a video-programming service's costs are fixed and constant (regardless of the number of subscribers served) is wrong. *See id.* at 11-13. The evidence shows that programming costs typically increase as penetration increases. *See id.*; *id.* Table 5.

At any rate, even if the 15 million MVPD subscriber figure were accurate, it would make no sense to assume that the 15 million subscribers must all come from the *United States* MVPD subscriber universe. If the issue is purchasing power, then the Commission should take account of *all* purchasers — including purchasers outside the United States. For example, MTV and HBO are now viewed by hundreds of millions of people around the globe. *See*, *e.g.*, Yoon Jae-joon, *MTV Website to Offer Information for Music Fans in Korean Language*, The Korea Herald (Feb. 14, 2000); *HBO Movie Channel to Hit India*, Business Line (Dec. 11,

Varney)). But, as the *FNPRM* itself recognizes, this assertion — which was unsupported by any citation of proof — was made "in 1997, when both MVPD competition and channel capacity were at lower levels than today." *Id.* It was just as wrong as a number of other statements in the same opinion that have since been disproved by the entry of Fox News and Fox Sports. *See Time Warner Inc.*, 123 F.T.C. at 208 (saying that entry by new video-programming services was "slow and costly" and that "[n]one of the channels that ha[ve] entered since 1991 has acquired more than a 1% market share").

³²See Ed Sherman, In the Zone, Chicago Tribune (Sept. 6, 1999).

³³Mark McLaughlin, *Prime Times at ESPN*, New England Business (Oct. 1, 1988).

1999). In sum, it is simply unclear why, if new video-programming services need 15 million subscribers to become viable, all those subscribers must be U.S. subscribers.

At a minimum, it makes no sense to translate the absolute 15 million figure into a percentage figure relative to the entire subscriber universe. Whereas it is clear that the subscriber universe grows continuously, there is no indication that the number of subscribers required for viability grows. *See* Joskow & McLaughlin 17. A recent estimate puts the MVPD subscriber universe at 88.79 million. *See supra*, p.10 & n.8. Thus, 15 million subscribers now amounts to only about 16.9 percent of the universe. When that number is doubled in step two, this makes the difference between a 40-percent open field and a 33.8-percent open field (and thus the difference between a 60-percent cap and a 67.6-percent cap). Adopting a percentage cap thus assures that the Commission's rule constantly reflects outdated data, contrary to the statute's plain directive.³⁴

b. The Assumption That Entrants Will Achieve Only 50-Percent Penetration Is Also Flawed.

Whereas the 15 million figure of Step 1 is too high, the 50-percent success figure of Step 2 is too low. The *Third Report* set out to determine "a cable network['s] . . . chance of obtaining subscribers that are not actively denied to it." *Third Report* ¶ 53; *see id.* ¶ 48 ("[A] typical cable network's probable rate of success of reaching subscribers through cable operators that do not flatly deny the cable network carriage."). It did so by simply averaging subscriber numbers for all national video-programming services in existence at the time. *See id.* ("In

³⁴See 47 U.S.C. § 533(f)(2)(E) (requiring that the Commission's rules "reflect the dynamic nature of the communications marketplace").

analyzing Kagan's June 30, 1999 census of cable network subscribers, we found that the 72 networks contained in the census had an average carriage rate of 53% (with a range from 95% to 5%) of 80.8 million subscribers."). The *Third Report* did so even while recognizing that these figures did not "reveal how many subscribers a cable network actively attempted — but failed — to reach" or "explain what market factors worked for or against a cable programmer's carriage rate." *Id*.

That makes no sense: averaged penetration numbers of existing services are no sensible proxy for entrants' likely carriage success. For one thing, some of the video-programming services included in the count undoubtedly had low penetration numbers simply because they were poorly marketed or had unappealing content. By broadening the open field based in part on carriage numbers of failing video-programming services, the Commission in effect sought to assure entry opportunities for low-quality services. That approach is both inconsistent with the Commission's stated aim of protecting entrants only from anticompetitive conduct and contrary to the statute. *See Time Warner II*, 240 F.3d at 1135 ("[W]e cannot see how the word unfair could plausibly apply to the legitimate, independent editorial choices of multiple MSOs.").

For another thing, other video-programming services included in the count had low penetration numbers precisely because they were recent entrants. Even the most appealing and successful video-programming service cannot expect widespread penetration overnight.

Because the supply of video-programming services has long grown much faster than cable operators' channel capacity, most cable operators at any given time are "channel-locked" and are unable to add new services until upgrades are completed. Thus, some of the counted video-programming services may well have had very high penetration a few years later.

In sum, the Commission's previous adoption of a 50-percent success rate is unsupportable. If the aim is to determine a meritorious video-programming service's "probable rate of success of reaching subscribers through cable operators that do not flatly deny the cable network carriage," *Third Report* ¶ 48, a much more accurate proxy would be the penetration level of mature and successful video-programming services, *see* Joskow & McLaughlin 18-19. If there is an element of "chance" in obtaining carriage at all, it is much better captured by the statistics of video-programming services whose lack of carriage is not the result of either poor quality or recent entry. 36

C. The Other Concentration-Related "Problems" to Which the *FNPRM* Points Are Even More Conjectural Than the Foreclosure Concern.

Given the way in which the Commission previously justified the 30-percent cap, and given the grounds on which the court of appeals reversed, one might have expected that the Commission's remand proceedings would be fairly limited in scope. In particular, because the court of appeals held only that the record did not support the Commission's collusion finding, one might have expected that the Commission would have set out simply to investigate whether the missing record support could be found. In addition, one might have expected that the Commission would invite comment whether, if no non-conjectural threat of collusion turned out to exist, it should raise the subscriber limit to 60 percent. *See Time Warner II*, 240 F.3d at

³⁵These services tend to have penetration levels well above the Commission's 50-percent success rate. For example, the *Seventh Competition Report* shows TBS as having 78 million subscribers out of an 84 million MVPD subscriber universe — roughly, a 92-percent success rate. *See Seventh Competition Report* Tables C-1, D-6.

³⁶Once the "success rate" is pegged at 90+ percent, DBS operators can deliver the entire subscriber minimum of 15 million, even taking into account the "success rate." *See* Joskow & McLaughlin 21.